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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/757,340	01/13/2004	Richard T. Sharpe	60877-045	3484
24341	7590	07/08/2005	EXAMINER	
MORGAN, LEWIS & BOCKIUS, LLP. 2 PALO ALTO SQUARE 3000 EL CAMINO REAL PALO ALTO, CA 94306			MULL, FRED H	
			ART UNIT	PAPER NUMBER
			3662	

DATE MAILED: 07/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/757,340	SHARPE ET AL.	
	Examiner	Art Unit	
	Fred H. Mull	3662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 12 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7,9-17 and 21-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7,9-11 and 23-32 is/are allowed.
- 6) ☒ Claim(s) 12-17 and 21-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>2-24-2005</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claims 12-17 and 21-22 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description and enablement requirements. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention, and thus do not enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Using claim 12 as an example, the ambiguity value is obtained using the first position of the object (lines 6-7), where the first position was found based on information received by a local reference receiver (lines 4-5). In the specification, ¶ 24 discloses determining ambiguity **N** for the purpose of determining the first position **x** using the local reference receiver/RTK system. However, in ¶ 29, the WADGPS system appears to determine position by using the **N** value from the first positioning procedure, not the **x** value (lines 2-3 after equation 9). In other words, the WADGPS appears to use the previously determined ambiguity value, rather than the first position, as claim 12 lines 6-

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7 states. Additionally, ¶ 27 shows the ambiguity value being determined before position is determined.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 12-17 and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kinal in view of Allison (previously cited).

Kinal discloses:

both a local reference receiver (col. 4, lines 39-52; col. 6, lines 18-21) and a wide-area differential satellite positioning system (col. 6, lines 16-18); and

determining a first position of the object based on information received from the local reference receiver and a wide-area differential satellite positioning system (col. 8, lines 6-12).

Kinal fails to disclose GPS positioning using carrier-phase. Kinal's GPS positioning uses code-phase.

Allison discloses:

GPS positioning using carrier-phase rather than code-phase increased the accuracy of the obtained position (col. 2, lines 39-60); and

determining further positions without re-determining the initial integer ambiguity while the satellite signal is continuously received (col. 3, lines 28-33).

It would have been obvious to use carrier-phase GPS rather than code-phase GPS in Kinal to increase positioning accuracy.

Since each position uses information from the local reference receiver, information from the wide-area differential satellite positioning system, and the floating ambiguity values, and the claim uses the word "comprising", it encompasses determining a first position of the object based on information received from the local reference receiver; and determining a second position of the object based on information received from the wide-area differential satellite positioning system and the floating ambiguity values.

3. The examiner also finds the following reference(s) relevant:

Lu, who discloses using carrier-phase rather than code-phase increased the accuracy of the obtained position (col. 3, lines 30-47).

Park, who discloses that once the ambiguity value is determined, it is not necessary to re-determine the initial integer ambiguity while the satellite signal is continuously received (p. 2, lines 11-13).

Applicant is encouraged to consider these documents in formulating their response (if one is required) to this action, in order to expedite prosecution of this application.

Allowable Subject Matter

4. Claim(s) 7, 9-11, and 23-32 is/are allowed.
5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred H. Mull whose telephone number is 571-272-6975. The examiner can normally be reached on M-F 9:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas H. Tarcza can be reached on 571-272-6979. The fax phone

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number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Fred H. Mull
Examiner
Art Unit 3662

fhm



THOMAS H. TARCZA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600